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Inside

Report

Nov/Dec 2001

- 10 Million and counting
- 40,000 trucks for 400,000 cubic yards
- 50,000 cubic yards completes major milestone



Steve McCracken

Fernald site reaches 10 million safe work hours

Fernald has surpassed all previous safety records and reached a new milestone: 10 million consecutive safe work hours without a lost-time away from work injury or accident. Our Building Trades construction group has gone 9 years without a lost-time away from work injury or accident. The total workforce has gone 1000 days without lost time away from work. This record is

impressive, especially when you consider the nature of our work, where on any given day workers are excavating soil, packaging and transporting waste and nuclear material, dismantling structures, constructing new facilities and operating complex treatment systems.

Fernald's track record clearly indicated that we were headed toward this milestone achievement. In December 1999, the site attained Integrated Safety Management (ISM) verification eight months ahead of schedule. During 2000, Fluor Corporation awarded five Tri-Star Awards to Fernald and IT Corp., and honored the site with two safety awards for exemplary work practices. In June 2000, the site reached 5 million safe work hours without a lost-time injury or accident. Just 7 months later, in January 2001, Fernald employees reached 7 million safe work hours. Shortly after that, the DOE's Office of Environment Safety and Health awarded Fluor Fernald Voluntary



Protection Program (VPP) Star Status.

I'm proud of our accomplishments here at Fernald. Site cleanup is moving along, and even though we're operating under an accelerated schedule, we still have an exemplary safety record. Let's keep it that way by staying alert to hazards and watching out for each other.

Steve McCracken
Director, DOE-Fernald

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On the cover: Workers install a pressure transducer riser on Cell 1. The pressure transducers will be placed within the riser, which extends down to the bottom of the drainage layer. This device will allow workers to accurately measure the water level within the drainage layer of Cell 1 (6319-d3166).

Looks change, but faces remain the same

The Fernald skyline is changing virtually everyday. The decontamination and demolition (D&D) of Plant 6, the former Metals Fabrication Plant, which was once used for major uranium metal fabrication processes: including rolling, machining, heat treating, pickling, scrap metal briquetting and inspection/packaging of uranium products is expected to be complete in mid-December. MACTEC, Inc., the contractor performing the work is on schedule to finish the project three months ahead of the original commitment.

In March 1999, Plant 6 was the last major plant to complete Safe Shutdown. During that process workers removed more than 205,000 pounds of hazardous materials that remained in the facility when production ceased in 1989.

In October 1999, Fluor Fernald awarded an \$8.54 million, three-year subcontract to demolish the largest (223,000 square foot) facility of all the former uranium processing plants. "The demolition of Plant 6 is the last big piece to fall into place so we can move forward with the below-grade remediation of a major portion of the site's former production area," said John Trygier, DOE-FEMP D&D project manager. "When this demolition is complete, six of the 10 major former production facilities will have been dismantled, which is a major step forward in the cleanup progress," said Trygier.

Although Plant 6 will be complete, the work crews will move on to other demolition projects. MACTEC was awarded a Demolition Closure Contract in August to complete all major remaining D&D work on site. Therefore, as workers demobilize in one area of the site, they will be establishing new mobilization work areas to move on to the next big project. Utilization of one contractor is a new concept, but it allows for a smooth transition between tasks and increased productivity to keep the work progressing ahead of schedule. MACTEC has recently mobilized work crews for the demolition of the Plant 2 Complex, Plant 3 Complex and the General Sump.



2002 DOE Cleanup Progress Briefing Meetings

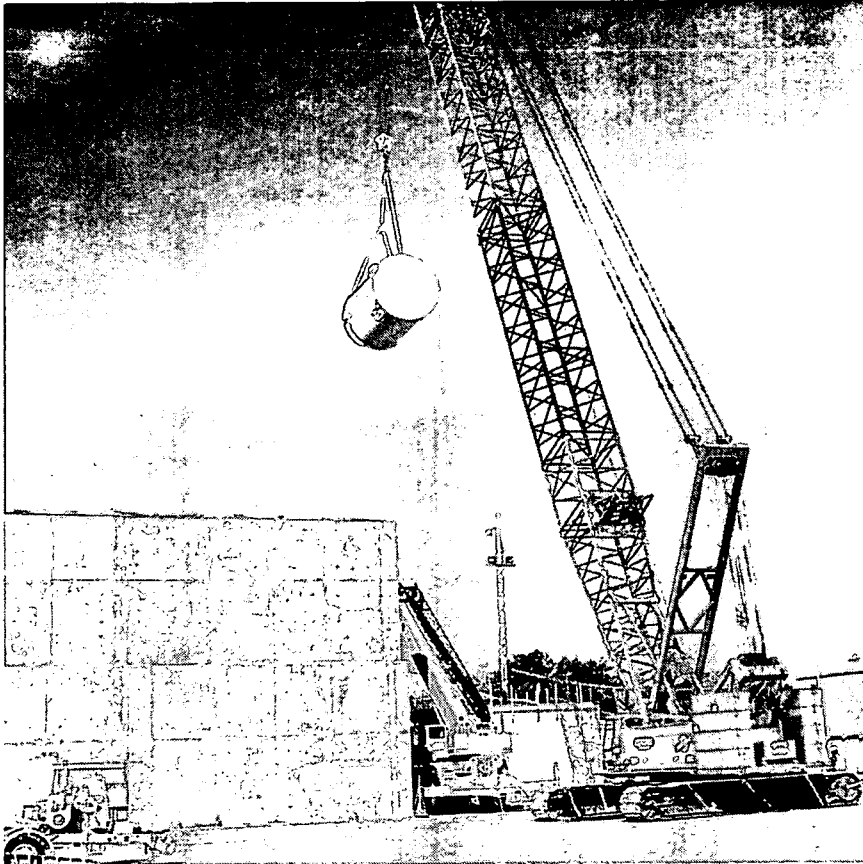
The new year brings a new schedule for the Cleanup Progress Briefings. With stakeholder support the meeting schedule will be modified from 10 meetings per year to six meetings.

- ☐ January – no meeting
- ☐ February 12 – cleanup projects overview
- ☐ March – no meeting
- ☐ April 9 – Silos monthly topic
- ☐ May 14 – site tour
- ☐ June 11 – cleanup projects overview
- ☐ July – no meeting
- ☐ August 13 – Waste Generator Services monthly topic
- ☐ September – no meeting
- ☐ October 8 – cleanup projects overview
- ☐ November – no meeting
- ☐ December 10 – informal review of cleanup projects (displays/exhibits)

For more information, contact Gary Stegner, DOE-FEMP, Public Information Officer, (513) 648-3153 or email: gary.stegner@fernald.gov.

Above right: (left to right) Dave Balzen, Fluor Fernald Plant 6 D&D Project Manager discusses progress on Plant 6 with Alan Boeckmann, Fluor Corporation President and COO, Susan Brechbill, DOE Ohio Field Office Manager and John Bradburne, Fluor Fernald Chairman and CEO on a recent tour of the site (7668-d0011).

Cleanup **Progress** Update

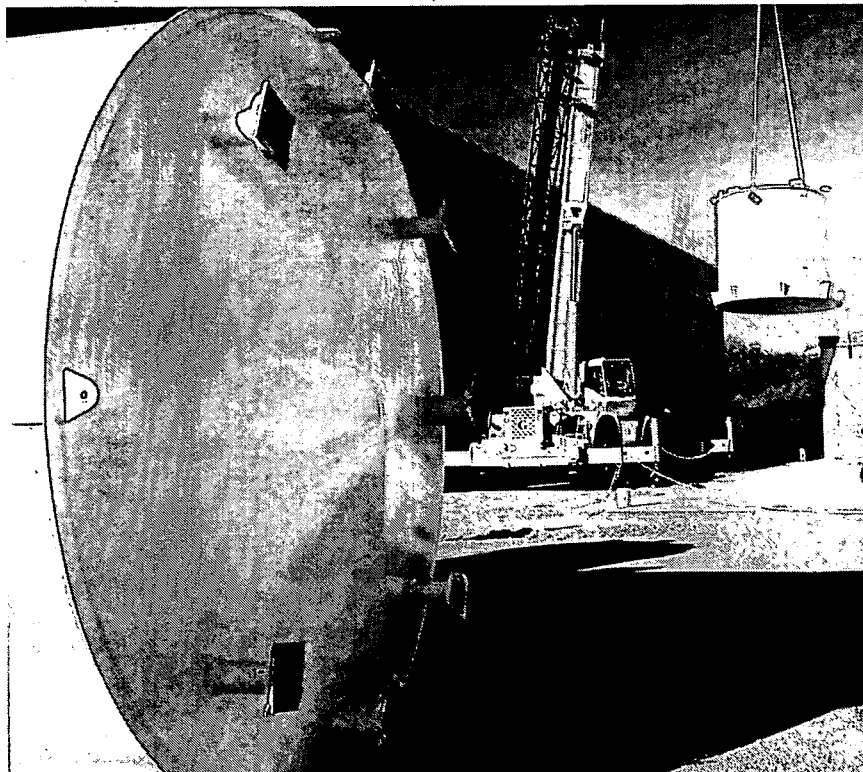


Waste Pits Remedial Action Project (WPRAP)

- ☐ Unit trains (#47 - #49) safely transported over 20,000 tons of material to Envirocare during October/November
- ☐ Excavation continues; construction crews have removed 42 percent of total cubic yards from Pit 3 and 25 percent of total cubic yards from Pit 2

Silos Project

- ☐ Continued material deliveries and various reviews for the Accelerated Waste Retrieval transition activities
- ☐ Continued the conceptual design for the Silo 3 Project
- ☐ Initiated an internal review and informal external review of the Conceptual Design Report for the Silos 1 & 2 Project



Above left: The 250-ton crane, which took 11 semis to deliver has been assembled and is currently being used to support work activity at the Silos. During final remediation, the crane will be used to build a bridge between Silos 1 & 2 and the future treatment facility (7385-d0870).

Left: A 240-foot crane boom lifts one of two condensate tanks, which will be used to hold Silos 1 & 2 material awaiting chemical stabilization (7385-d852).

Soil and Disposal Facility Project

- Continued placing impacted material in cells 2 and 3 of the On-Site Disposal Facility (OSDF); approximately 50,000 cubic yards have been placed this season
- Continued the bulk debris staging at the On-site Material Transfer Area; over 900 roll-off boxes were emptied
- Completed installation for the Cell 1 cap; installing monitoring devices and final vegetative cover on the cap
- Continued crushing concrete foundations in the former process area to be used for haul roads in the OSDF; over 2,200 cubic yards have been crushed to date
- Completed all excavation and debris removal in the Southern Waste Units
- Final Natural Resource Restoration Plan submitted to DOE
- Awarded contract for Phase IV of the OSDF and Area 3A/4A excavation to IT Corporation

Aquifer Restoration/Wastewater Project

- Developed a new rehabilitation treatment chemistry which proved to be initially successful in addressing residual plugging in the five re-injection wells
- Continued construction of the well houses and associated infrastructure required to address a uranium contamination plume which exists under the Pilot Plant Drainage Ditch area
- Installed, developed, sampled, and verified the performance of a new multi level groundwater monitoring well which will allow us to obtain a vertical profile of the uranium contamination in the Great Miami Aquifer
- Submitted the *Responsiveness Summary for the OU5 ROD Explanation of Significant Differences* to U.S. EPA, which addressed public comments received during the 30-day public comment period and at the Public Hearing held on August 23
- August/September: extracted 345,979,000 gallons of groundwater; treated 195,639,000 gallons of groundwater; removed 141 net pounds of uranium from aquifer



Top: John Walters (left) and Tom Platter (right) of the Water Monitoring Group guide the installation of the first multi-level monitoring well in the South Field uranium plume (7676-d0033).

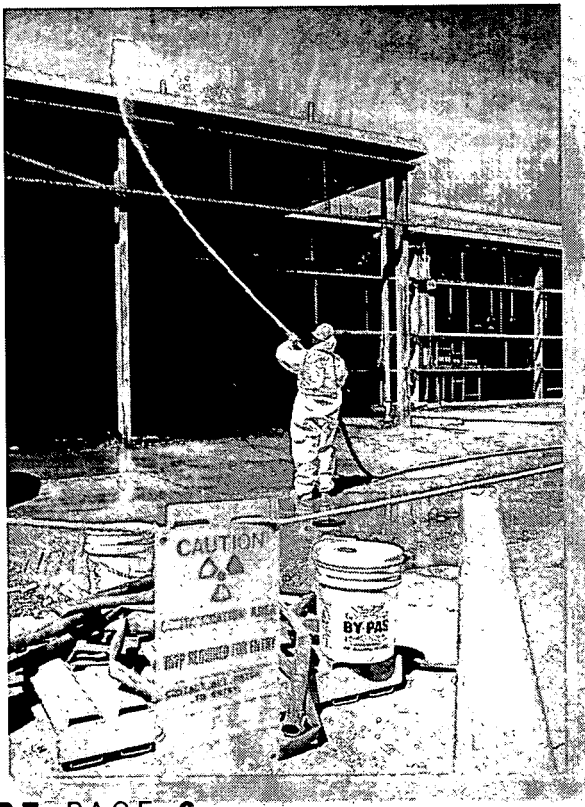
Above: Gene Allen, operator at the Advanced Waste Water Treatment Plant performs a jar test on clarifier sludge to determine proper chemical addition rates for settling of the sludge (5531A-d1136).

Cleanup **Progress** Update



Above: Wise Services installs the new Telecommunications Building. This facility will become the main hub for the phone and LAN system at the Fernald site. This facility replaces the current Main Distribution Frame Room located in the Administration Building (7689-d0004).

Right: A MACTEC laborer applies water to the roof of Plant 6 prior to the shearing of the building. The water is applied to control fugitive dust emissions (6639-d1024).



Demolition Projects

Decontamination & Dismantlement (D&D)

- Plant 6 Complex —
 - ◆ Continued below grade interior demolition
 - ◆ Began exterior transite removal and structural demolition
- Facilities Shutdown and Multi-Complex
 - ◆ Completed removal of the laundry equipment for shipment to the Mound facility in Miamisburg, Ohio
 - ◆ Completed the domestic water capping on "C" street
 - ◆ Continued planning work in the Health & Safety Building (53A), Thorium Warehouse (64) and the Old Plant 5 Warehouse (65)
 - ◆ Completed demolition of Buildings 3B and 3C, bringing the total to 95 structures currently removed on site

Waste Generator Services

- Product shipments to DOE-Portsmouth
 - ◆ 187.7 metric tons uranium (MTU) shipped in FY01
 - ◆ 36.6 MTU shipped in October
 - ◆ Total of 3,396.2 MTU shipped to date
 - ◆ Equates to 94 percent of the revised overall project goal of 3,624 MTU
- Other product disposition
 - ◆ Completed installation of second and third Drum Repackaging Stations
 - ◆ Received DOE approval for private sector sale of 76 metric tons uranium
- Uranium Waste Disposition
 - ◆ Completed characterization of approximately 1,904 containers of an estimated 7,000 container inventory
 - ◆ Packaged approximately 10,000 cubic feet of depleted metal for shipment to the Nevada Test Site (NTS)
 - ◆ Packaged approximately 4,400 cubic feet of uranium compounds for shipment to NTS

Waste Generator Services

■ Low Level Waste Project

- ◆ Shipped 303,000 cubic feet to Nevada Test Site (NTS)
- ◆ Placed 231,000 cubic feet in Soil Pile 7 for disposal at Envirocare of Utah through Waste Pits Project
- ◆ Staged 194,000 cubic feet at the OSDF Materials Transfer Area for disposal in the OSDF
- ◆ FY01 total dispositioned — 728,000 cubic feet







■ Waste Treatment & Waste Storage

- ◆ Completed final "Batch 10" shipment of liquid mixed waste (approximately 3,443 gallons) to the Toxic Substance Control Act Incinerator (TSCAI) at Oak Ridge, TN
- ◆ 17,460 gallons of liquid mixed waste shipped in FY01
- ◆ Began bulking of liquid mixed waste into Batch 12; submitted Batch 11 application for treatment to TSCAI
- ◆ Made first organic mixed waste shipments to Materials & Energy Corporation at Oak Ridge
- ◆ Completed sorting and segregation of legacy chemicals into radiological and non-radiological inventories
- ◆ Sent 254,255 net pounds of non-radioactive recyclable materials and 3,847 fluorescent lamps to various vendors for recycling in FY01



Above: Nuclear Material Disposition chemical operator's place an enriched uranium ingot section into steel banded wooden shipping containers (7368-d396).

Fernald Shipments – FY01 Closeout and FY02 Current

Contents / Destination	Shipment Mode	FY01 Totals (9/30/01)	October Monthly Total	Approximate Project Totals
Low-Level Waste (Nevada Test Site)		303,000	16,002 cu. ft.	5.89 million cu. ft.
Mixed Waste - Materials & Energy Corporation at Oak Ridge		0	745 cu. ft.	745 cu. ft.
Liquid Mixed Waste - Toxic Substance Control Act Incinerator at Oak Ridge		17,460 gal.	0	214,460 gal.
Nuclear product/materials (Portsmouth)		476,878 net lbs. or 188 metric tons Uranium	88,744 net lbs. or 36.7 metric tons uranium	8.7 million net lbs. or 3,396 metric tons uranium
Soil and debris - On Site Disposal Facility		34,400 in-place cu. yards	20,648 in-place cu. yards	653,642 in-place cu. yards
Waste Pits Project (Envirocare of Utah, Inc.)		112,000 tons	6,460 tons	292,400 tons



Left: The Waste Pits team has another achievement to boast about — this summer they received a Safety Excellence Award for reaching 2,000,000 Safe Work Hours without a lost-time accident (6944-d1714).

Rail shipments - safety's the priority

On April 26, 1999, the first unit train carrying material from Fernald's Waste Pits left the site en route to Envirocare of Utah.

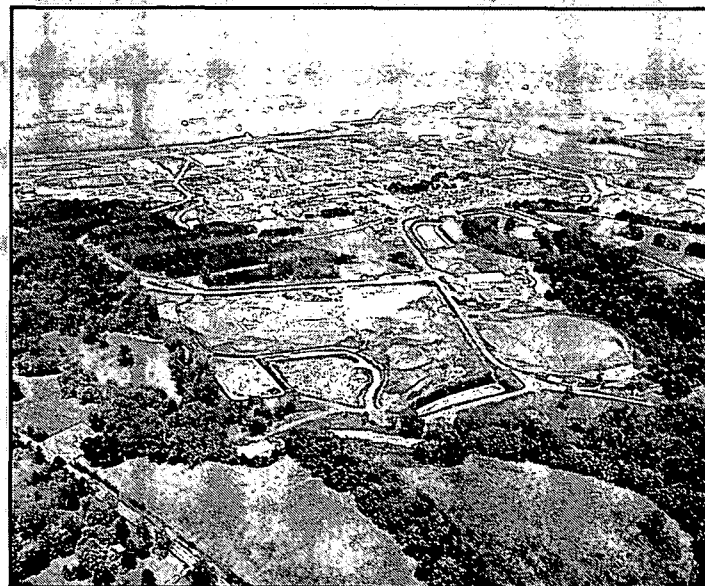
On Dec. 11, unit train 50 left Fernald for the 1,900-mile trip to Envirocare. "This is a real accomplishment considering 49 unit trains have already left the site and returned without a single safety incident during transport," said Dave Lojek, DOE-Fernald Waste Pits Project Manager. "We've more than scratched the surface, but we still have a way to go before we complete the waste shipments."

The project has been successful due to coordination between IT Corp., the rail carriers, Envirocare, stakeholders, regulators and contractors. By the end of the year, more than 310,000 tons of waste will have been shipped off-site since rail shipments began. "Over the duration of the project, we'll continue to focus on achieving a safe, steady state of operation for all phases of the project, including waste pit excavation, treatment, transportation and disposal," said Lojek.

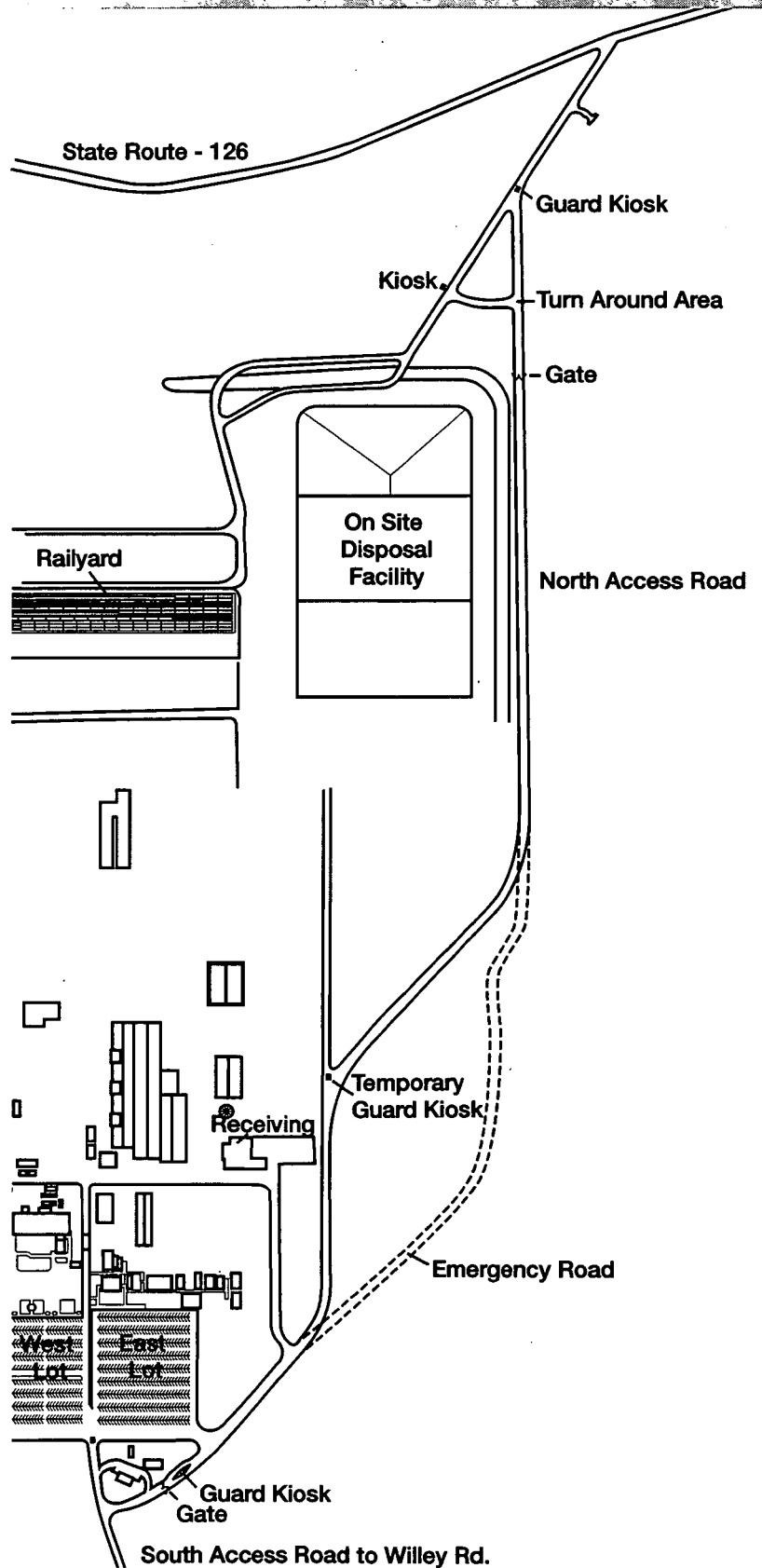
Southern Waste Units — major project completed

A significant milestone was reached with the completion of excavation of the Southern Waste Units, for three construction seasons the biggest excavation project at Fernald. The 20-acre area south of the site consisted of the Active Flyash Pile, the Inactive Flyash Pile and the South Field. Most of the material in the flyash piles came from the coal-fired boiler plant; however, the South Field was also used as a dumping site for contaminated materials from the process area during the years of production. Field sampling determined the runoff and leaching from this area to be a major source of contamination to the Great Miami Aquifer.

A mile-long Haul Road was built in 1998 that connected the Southern Waste Units with the On-Site Disposal Facility (OSDF). During the three years of excavation, approximately 40,000 dump trucks carried over 400,000 cubic yards of material to the OSDF for final disposition. About 6,000 cubic yards that didn't meet the waste acceptance criteria of the OSDF was shipped off site for disposal. "Reaching the final remediation level for the remaining soils at the South Field means we've not only completed the largest excavation project outside the production area, but we have taken away the leading cause of contamination to the aquifer," said J.D. Chiou, Fluor Fernald's Soil and Disposal Facility Project Manager. "Next year we will begin to restore this area, following the strategy in our restoration plan."



Above: A Spring 2001 bird's-eye view of the Southern Waste Units with the former Production Area and OSDF in the background (7636-230).



Fernald North Access Road changes

Several changes have been implemented regarding the North Access Road due to the expansion of the On-Site Disposal Facility and heightened security posture at the site. Anyone entering the site from Route 126 must show a valid security badge to the guard at the Temporary Security Kiosk. Two newly installed gates will be closed during the evenings and on all weekends. The temporary guard post will be operational until the North Access Road is permanently closed to through traffic beginning March 1, 2002.

Fluor Fernald United Way campaign largest ever:

Fluor Fernald's 2001 United Way Campaign began Sept. 1, much like it had for the past 15 years, with posters, pledge cards, meetings and cookouts. Then on Sept. 11, disaster struck. "Going into the campaign we had many challenges. Our workforce was down by over 100 because of attrition, the stock market was sluggish and business in Cincinnati was off," said Debbie Jenkins, Fluor Fernald United Way co-chair. "We thought a goal of \$160,000 was certainly a stretch goal in light of this environment."

The terrorist attacks on New York and Washington shocked and angered the Fernald workforce. On Sept. 12, Fluor announced that it would match all money raised for the National Red Cross dollar for dollar. Immediately, some events on the United Way calendar for the month became fundraisers aimed at the Red Cross National Relief effort. T-shirts, flags and other items were sold through the United Way that went directly to the recovery efforts. The Fernald Employees Athletic Association Softball League handed Fluor Fernald Chairman and CEO John Bradburne a check for \$5,800 as 150 players opted to waive any post season recognition so the money could go to the relief effort. "I am overwhelmed by the generosity of our coaches and players," Bradburne said. "This is really a reflection of the compassion and caring that Fernald employees have for their community and our country."

While the need on the national level had grown, the needs within our community had not changed. Therefore Fernald United Way organizers urged employees to respond at home and to the attack. "Toward the end of the campaign employees were handing us checks for \$100, \$200, \$500. They just wanted to do their part," said Tina Mefford Craig, also a campaign co-chair.

When the pledge drive and fundraisers were complete more than \$200,000 had been raised thanks to employees and matching contributions through the Fluor Foundation. Of the total raised during the campaign \$43,000 went to the Red Cross.

On Oct. 26, the company was recognized for exceeding its goal at the Cincinnati United Way Campaign finale. Overall, more than \$60 million was raised in this area.

"When there is a need Fernald responds. It's that simple," Bradburne said. This year was certainly no exception.



Top: During the culmination of Fernald's Pie-in-the-Face contest, Bob Nichols, Project Execution Director prepares for a taste of pie served by his son Andrew. Thanks to the generosity of employees, this event raised over \$6,000 for United Way (7660-d0075).

Above: Jim Conner and managers from the Fernald softball league present Fluor Fernald Chairman and CEO John Bradburne with a check for \$5,800. More than 150 players from 12 softball teams donated their league participation fees to support the National Red Cross Disaster Relief effort (7682-d0003).



Above: Crosby first grade teacher Diane Barrow prepares an experiment for her after school science club. With money earned from recycling Fernald's cans, the school purchased goggles, balances and microscopes for the Science Lab (7701-d13).

What can a can do?

That can you recycle is worth a lot. It is an encouragement for a job well done. It is positive reinforcement for a great attitude. It is equipment to build a land lab. It is supplies for a Science Club.

According to Chris Brown, principal at Crosby Elementary, the money raised from recycling the cans donated from Fernald can do amazing things. "The \$550 we have received this year from the recycling program are discretionary funds that otherwise would not be available. The extra incentives, supplies and rewards that I can give the teachers for their students is what makes Crosby special."

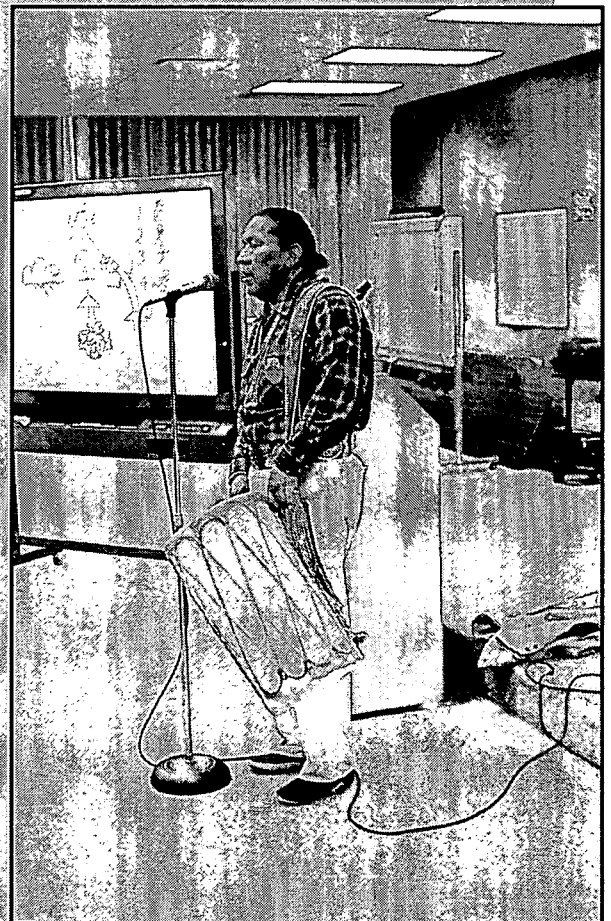
Medicine Man brings own perspective to Native American Heritage Month

Medicine Man and retired university professor James Peshlakai of Cameron, Arizona spoke in front of a full house on Nov. 5, as he shared his experience and philosophy as part of Fernald's recognition of Native American Heritage Month. Peshlakai expressed his personal mission of passing the Navajo customs and traditions on to the next generation. When he is not speaking to groups, Peshlakai and his wife conduct cultural workshops and tours at the Grand Canyon.

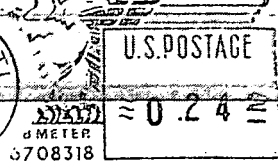
A prolific writer, Peshlakai has authored numerous papers and has nearly one dozen books in various stages of completion. "I write so that our ways are not forgotten," said Peshlakai. He noted his concern that Native American youngsters have not been properly exposed to or retained some of the basic traditions even in areas like hunting.

When not writing on his own, Peshlakai has also provided guidance to friend Tony Hillerman author of Jim Chee novels. In fact he was a feature character in Hillerman's book *First Eagle*. "Tony (Hillerman) has promised to cast me in the role of the bad guy when his latest book is made into a film. I can't wait," said Peshlakai.

Right: Medicine Man James Peshlakai performs 'Friendship Chant' for the audience, which is a traditional Navajo song used during special ceremonies. He invited everyone to dance while he sang and played the drum (7253-d0056).



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New documents added to the Public Environmental Information Center

The following information was added to the Public Reading Room, Administrative Record files and Post Record of Decision files at DOE's Public Environmental Information Center (PEIC):

- ☐ Waste Pits Remedial Action Project
 - ◇ OEPA Letter: Approval – Direct Haul of Bulk Waste to Waste Pits Remedial Action Project
- ☐ Soil Characterization and Excavation Project
 - ◇ OEPA Letter: Approval – OSDF Plans and Change Pages for Impacted Material Placement Plan
 - ◇ Comments on Fernald Site Crayfish Survey at Paddys Run
 - ◇ DOE Letter: Request for Concurrence to Initiate Soil Stock Piles
- ☐ Facilities Closure and Demolition Project
 - ◇ OEPA Letter: Approval of Implementation Plan for Above-grade Decontamination and Dismantlement of Operable Unit 3 Multi-complex
- ☐ Silos Project
 - ◇ Revised Draft Remedial Action Work Plan for Radon Control System Phase I Operation
- ☐ Aquifer Restoration Project
 - ◇ DOE Letter: Project Specific Plan for the Installation of Monitoring Wells in the Pilot Plant Drainage Ditch Plume
 - ◇ September 2001 Re-Injection Operating Report

*Note: This does not represent the complete list of new documents added to the PEIC.
Contact the PEIC, 513-648-7480 for a complete list of new documents.*



Fernald Report

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